

Genetic Probability

Name _____

1. In fruit flies, red eyes are dominant to white eyes and flat wings are dominant to wrinkled wings. Let E stand for red eyes and e for white eyes. Let W stand for flat wings and w for shriveled wrinkled wings.

Make a cross between a male fly that is hybrid for both eye color and wing type with a female fly that is hybrid for eye color but has wrinkled wings.

Set up the cross: _____ x _____

Now list all possible sex cells from the male (sperm) and from the female (eggs).

Sperm	Egg

2. Make a Punnett square to show all possible offspring genotypes. Put male sex cells along the left side and female sex cells across the top.

3. How many flies have:

Red eyes and normal wings? _____ = _____ %
 Red eyes and wrinkled wings? _____ = _____ %
 White eyes and normal wings? _____ = _____ %
 White eyes and wrinkled wings? _____ = _____ %

4. In pea plants, tall (T) is dominant to short (t). In a cross between two tall pea plants, the result produced 211 tall plants and 52 short plants. What is the genotype of each parent?

Male: TT, Tt, or tt; Female: TT, Tt, or tt